## SEQUENCE LISTING

<110>	HARVEY, BARRETT R. GEORGIOU, GEORGE IVERSON, BRENT L.	
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gatggaactg ttaaactcct gatctactac acatcaagat tacagtcagg agtcccatca 180
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aaqcctqqqq cctcaqtqaa qatttcctqc aaaqattctq qctacqcatt cagtagctct 480
tggatgaact gggtgaagca gaggcctgga cagggtcttg agtggattgg acggatttat 540
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 Tyr Tyr Thr Ser Arq Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Gln Glu Gln
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 Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp
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Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Ser Ser Ser

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Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe 180 185 190

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 195 200 205

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Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Phe Leu Ile 35 40 45

Tyr Tyr Thr Ser Arg Leu Gln Pro Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln 65 70 75 80

Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Pro Pro Trp 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly 100 105 110

Ser Asp Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser 115 120 125

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 130 135 140

Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Asn Ser Ser 145 150 155 160

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile 165 170 175

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Ser Asn Tyr Asn Gly Lys Phe 180 185 190

Glu Gly Lys Ala Ile Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 195 200 205

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                                                 45
Tyr Tyr Thr Ser Arg Leu Leu Pro Gly Val Pro Ser Arg Phe Ser Gly
Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln
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Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Pro Pro Trp
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly Gly
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Ser Asp Gly Gly Ger Gly Gly Gly Ser Gly Gly Gly Ser
Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
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                        135
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Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Asn Ser Ser
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Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
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Glu Gly Lys Ala Ile Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 195 200 205

Met Gln Leu Ser Ser Leu Thr Ser Val Asp Ser Ala Val Tyr Phe Cys 210 215 220

Ala Arg Ser Gly Leu Leu Arg Tyr Ala Met Asp Tyr Trp Gly Gln Gly 225 230 235 240

Thr Ser Val Thr Val Ser Ser 245

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120

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala

Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Ser Ser Ser

145 150 155 160

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile 165 170 175

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe 180 185 190

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
195 200 205

Met Gln Leu Ser Ser Leu Thr Ser Val Asp Ser Ala Val Tyr Phe Cys 210 220

Ala Arg Ser Gly Leu Leu Arg Tyr Ala Met Asp Tyr Trp Gly Gln Gly 225 230 235 240

Thr Ser Val Thr Val Ser Ser 245

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Tyr Tyr Thr Ser Arg Leu Gln Pro Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln 65 70 75 80

Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Pro Pro Trp 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly 100 105 110

Ser Asp Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser 115 120 125

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 130 135 140

Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Asn Ser Ser 145 150 155 160

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile 165 170 175

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Ser Asn Tyr Asn Gly Lys Phe 180 185 190

Glu Gly Lys Ala Ile Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 195 200 205

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Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Phe Leu Ile
         35
                                                 45
Tyr Tyr Thr Ser Arg Leu Leu Pro Gly Val Pro Ser Arg Phe Ser Gly
                         55
Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln
                     70
                                         75
Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Pro Pro Trp
                 85
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly Gly
Ser Asp Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser
        115
                            120
Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
    130
                        135
                                            140
Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Asn Ser Ser
                    150
                                        155
Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
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741

<400> 24

165 170 175

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Ser Asn Tyr Asn Gly Lys Phe 180 185 190

- Glu Gly Lys Ala Ile Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 195 200 205
- Met Gln Leu Ser Ser Leu Thr Ser Val Asp Ser Ala Val Tyr Phe Cys 210 215 220

Ala Arg Ser Gly Leu Leu Arg Tyr Ala Met Asp Tyr Trp Gly Gln Gly 225 230 235 240

Thr Ser Val Thr Val Ser Ser 245